

[FIG.2]

- 201: BEACON
- 202: SUPERFRAME
- 203: SUPERVISED ACCESS PERIOD
- 5 204: UNSUPERVISED ACCESS PERIOD
- 205: SUPERVISED ACCESS END
- 206: UNSUPERVISED ACCESS END

[FIG.3]

- 10 301 CONTENTION BASED ACCESS MECHANISM
- 302 POLLING BASED ACCESS MECHANISM
- 303 BEAM ACCESS COORDINATOR
- 304 MEDIUM ACCESS CONTROL (MAC) LAYER
- 305 PHYSICAL (PHY) LAYER
- 15 306 MANAGEMENT ENTITY

[FIG.6]

- POWER ON
- SCAN
- 20 ASSOCIATION REQUEST
- ASSOCIATION RESPONSE
- ASSOCIATION SIGNALING TRANSMISSION (502)
- ACQUISITION REQUEST (501)
- ACQUISITION RESPONSE (504)
- 25 RIFS PERIOD (503)
- TRAINING SEQUENCE (505)
- DATA TRANSFER/NORMAL OPERATION

HIGH ACK LOSS/POLL LOSS/ACTIVY SILENCE TIME?

DATA TRANSFER/NORMAL OPERATION

AP ALTERNATES BETWEEN OMNI-DIRECTIONAL MODE AND

5 DIRECTIONAL MODE

AP IN SEARCH MODE

AP IN OMNI-DIRECTIONAL MODE

10

[FIG. 7]

SWEET

BEAM FORMER (PRIMARY)

RECEIVER

15 BEAM FORMER (SECONDARY)

RECEPTION POWER LEVEL MEASUREMENT SECTION

[FIG. 8]

START

20 610 DETECT USER TRANSMISSION IN PRIMARY BEAM

SET SECONDARY BEAM TO POSITION OR EXTREME EDGE OF PRIMARY

BEAM 607 MEASURE RECEPTION POWER VALUE

608 DIRECT TRANSIENT CURRENT IN RECEPTION POWER?

COMPLETE SEARCH?

25 STORE BEAM ANGLE

606 INCREMENT BEAM POSITION

609 USER LOCATION IS BISECTOR OF ANGLE BETWEEN EDGES OF

DETECTED BEAM

STOP

[FIG.11]

- 5 801 WLAN SCAN AND DETECTION
- 802 FIXED BEAM WLAN
- 803 M START BEACON DETECTION AND SYNCHRONIZATION
- ASSOCIATION SIGNAL TRANSMISSION
- ASSOCIATION AND GROUP ID ASSIGNED
- 10 804 DYNAMIC BEAM WLAN
- DETECT UNSUPERVISED ACCESS MODE
- ASSOCIATION SIGNAL TRANSMISSION
- ASSOCIATE
- 806 ACQUISITION SIGNAL TRANSMISSION
- 15 GROUP ID ASSIGNMENT
- GROUP ID ASSIGNED

[FIG.12]

- 904: GROUP "A" PERIOD
- 20 905: GROUP "B" PERIOD
- BEAM 1
- BEAM 2
- BEAM 3

25 [FIG.13]

- 1001: GROUP "A" PERIOD
- 1002: DOWNLINK PERIOD

1003: UPLINK PERIOD

GROUP "B" PERIOD

BEAM 1

BEAM 2

5 BEAM 3

[FIG. 14]

1001: GROUP "A" PERIOD

1002: DOWNLINK PERIOD

10 1003: UPLINK PERIOD

GROUP "B" PERIOD

BEAM 1

BEAM 2

BEAM 3

15

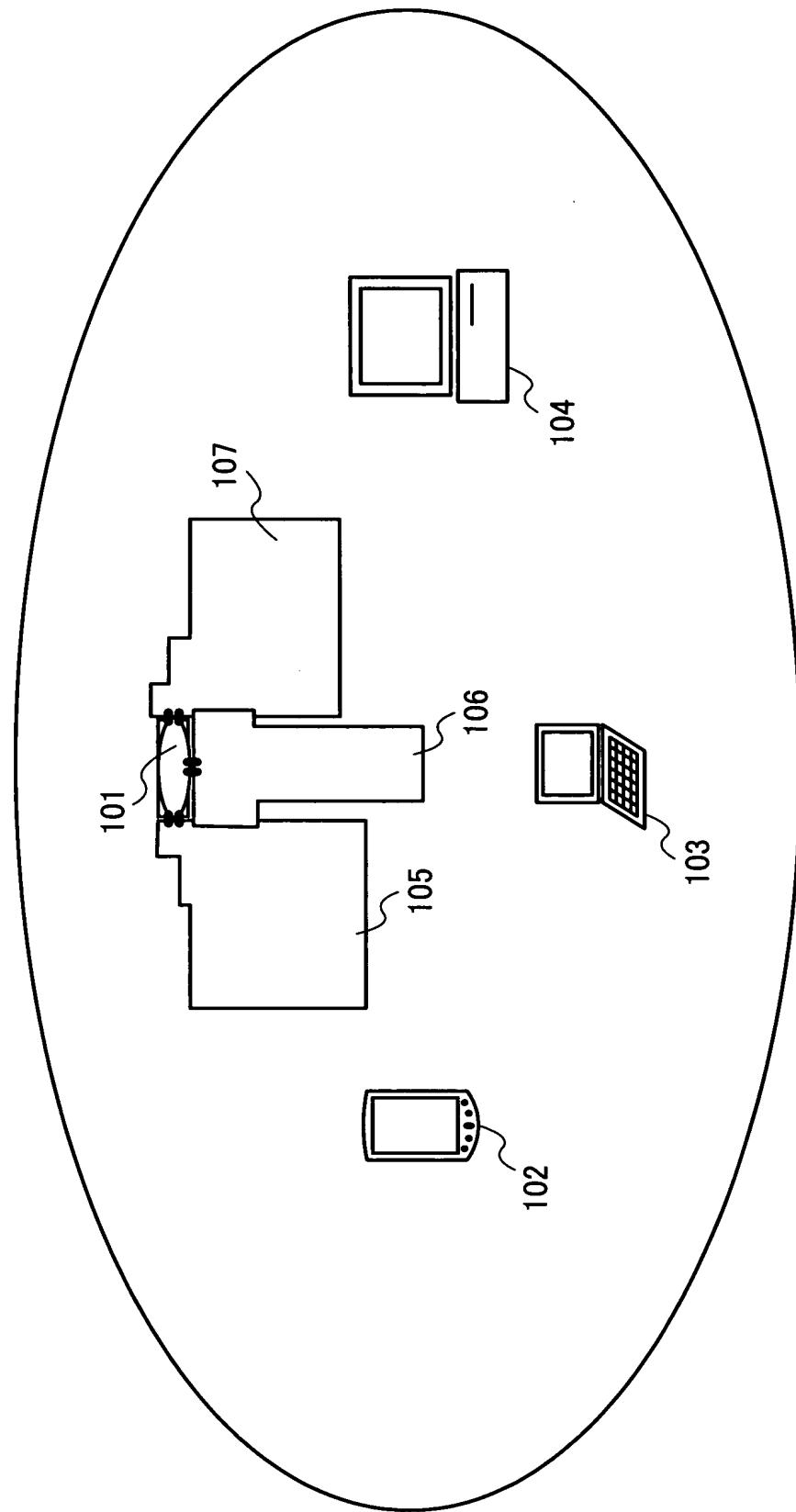


FIG. 1

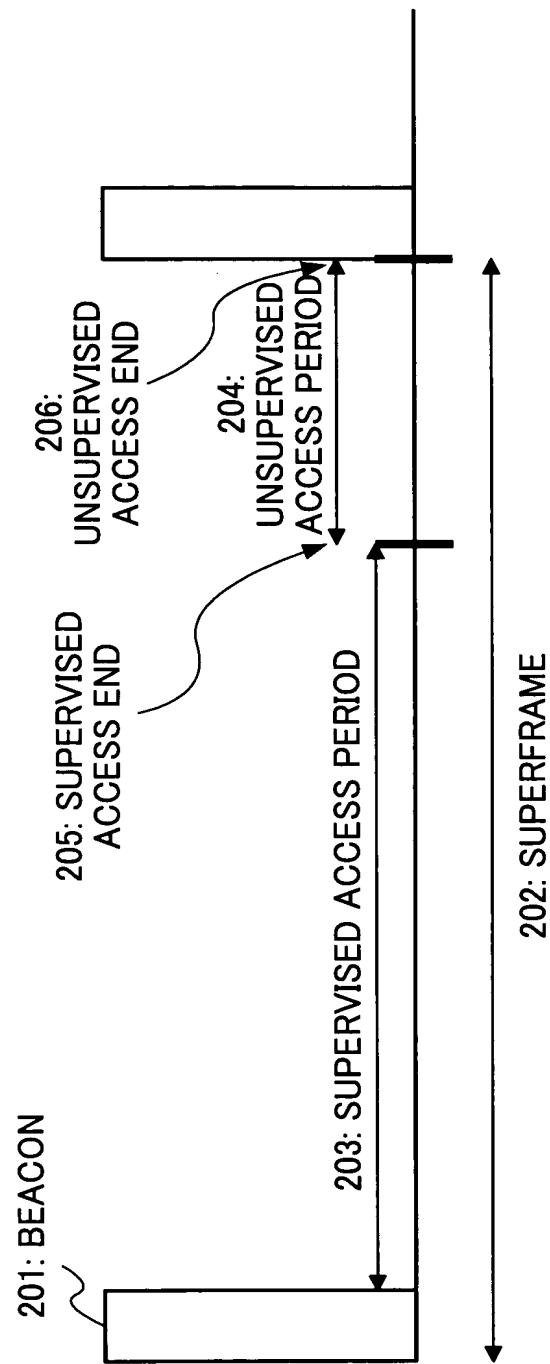


FIG.2

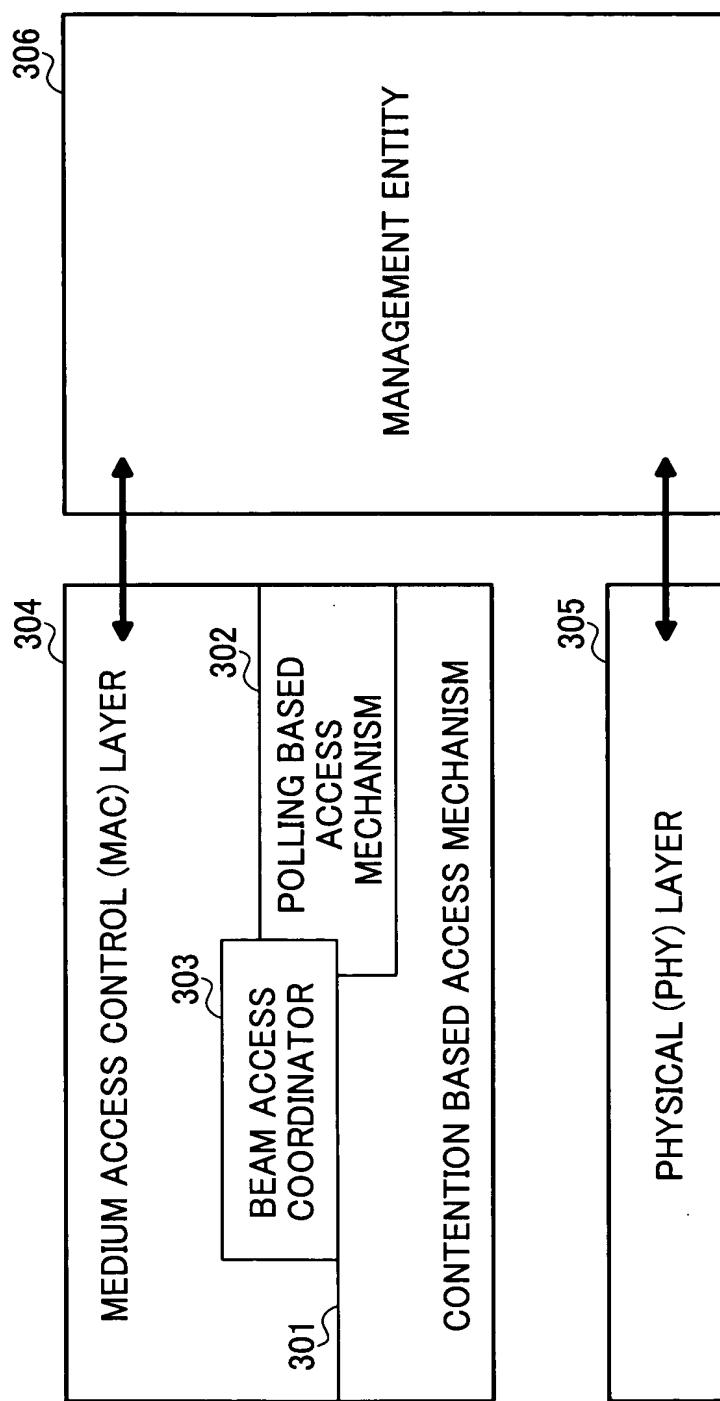
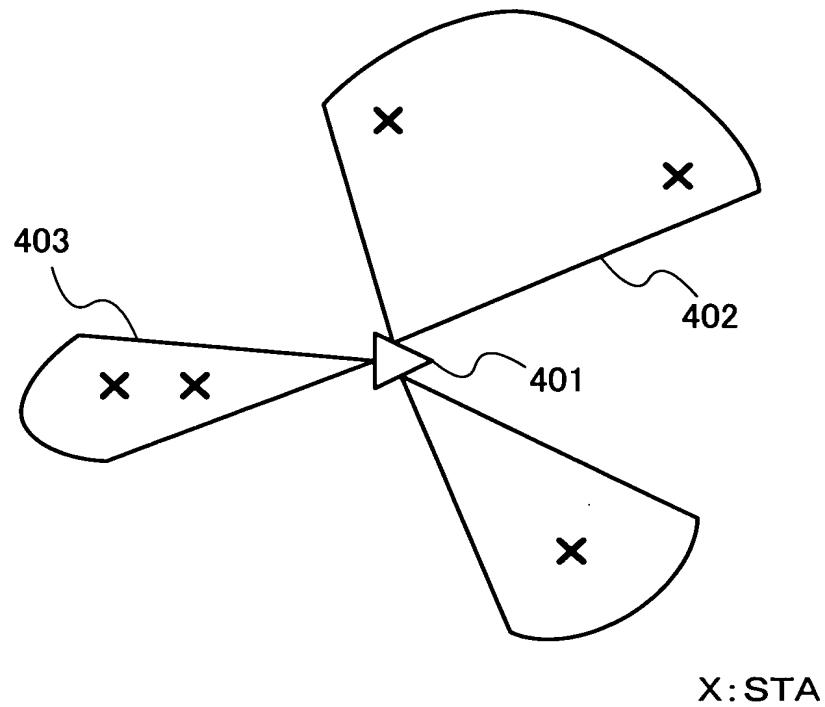


FIG.3

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X: STA

FIG.4

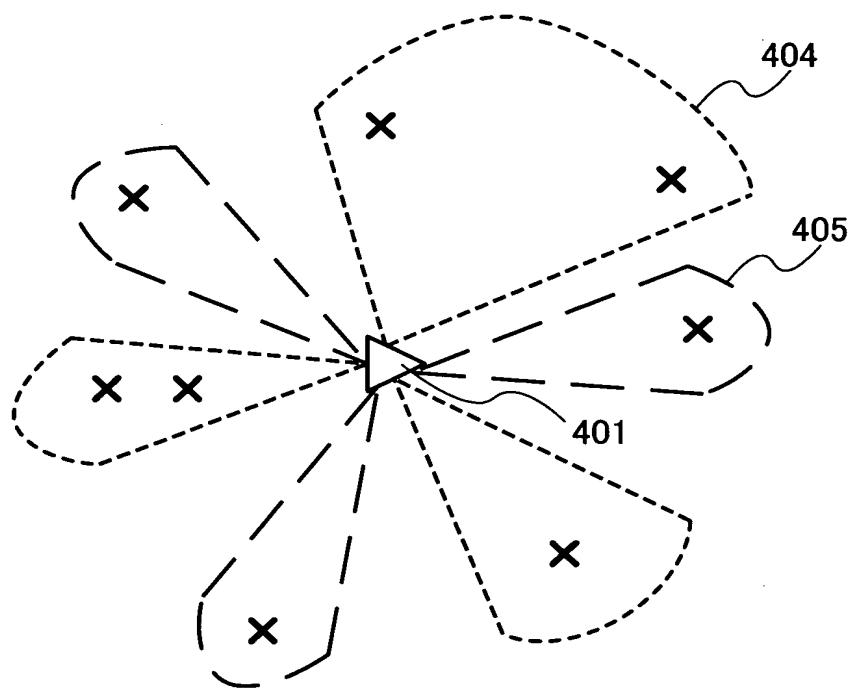


FIG.5

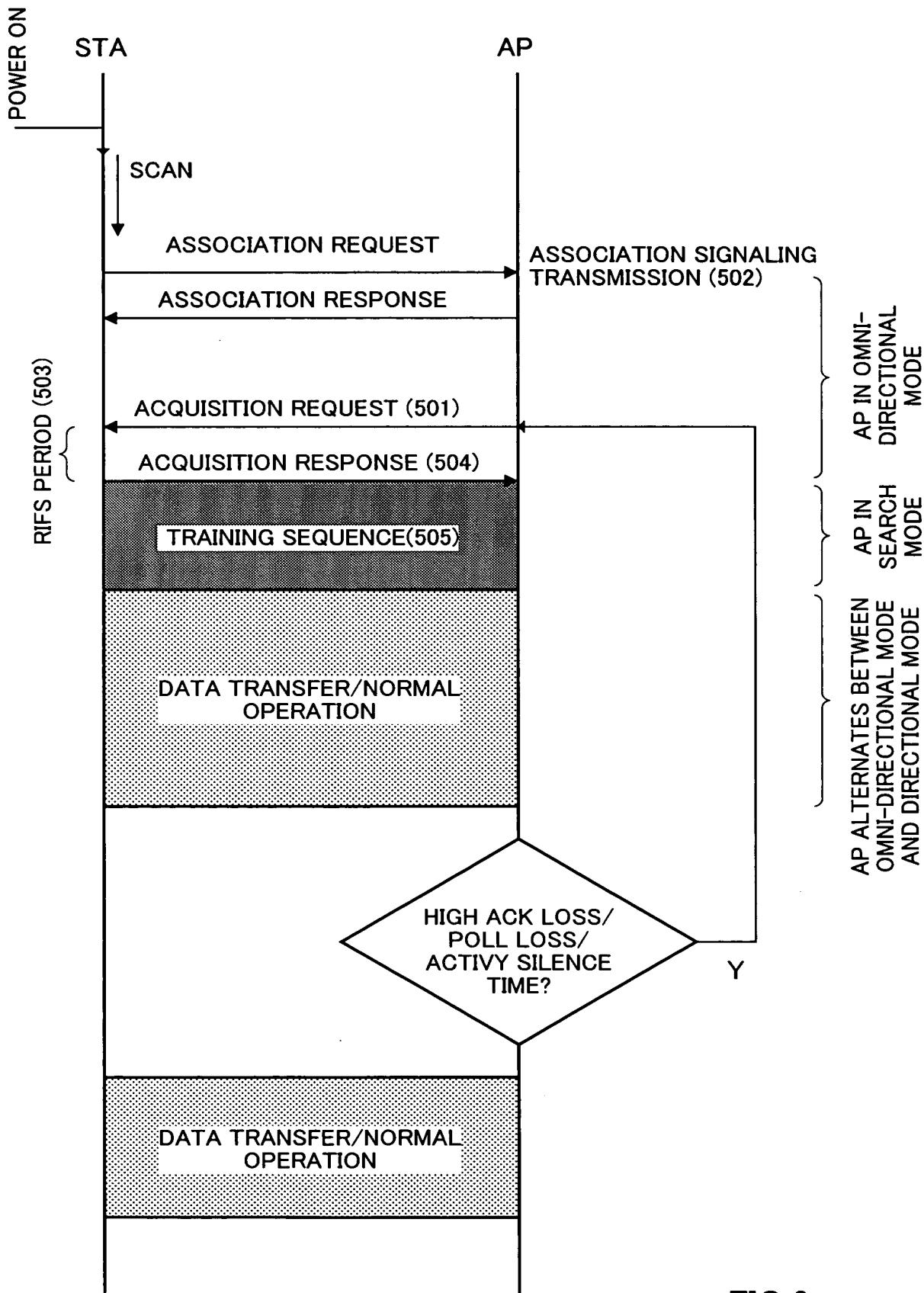


FIG.6

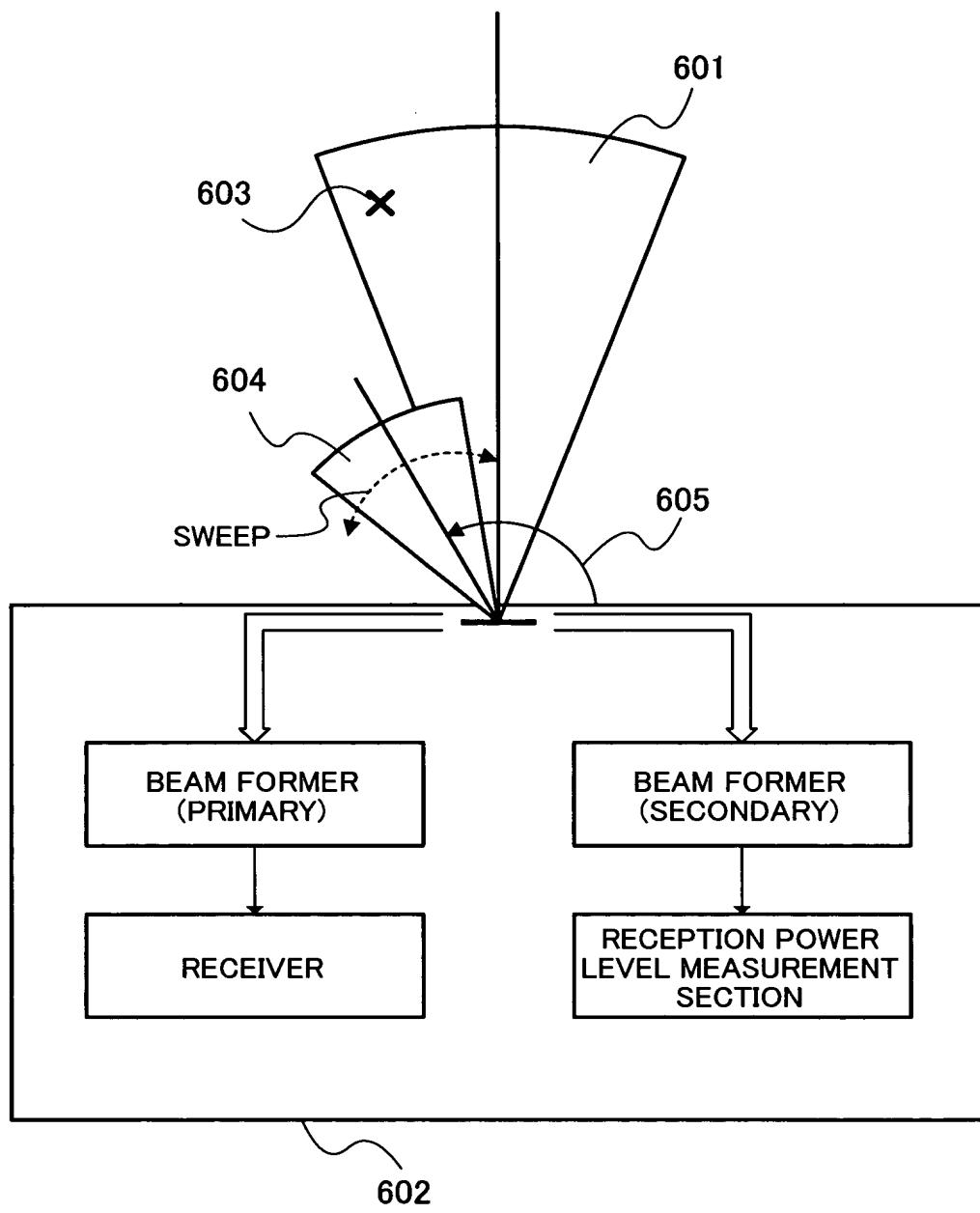


FIG.7

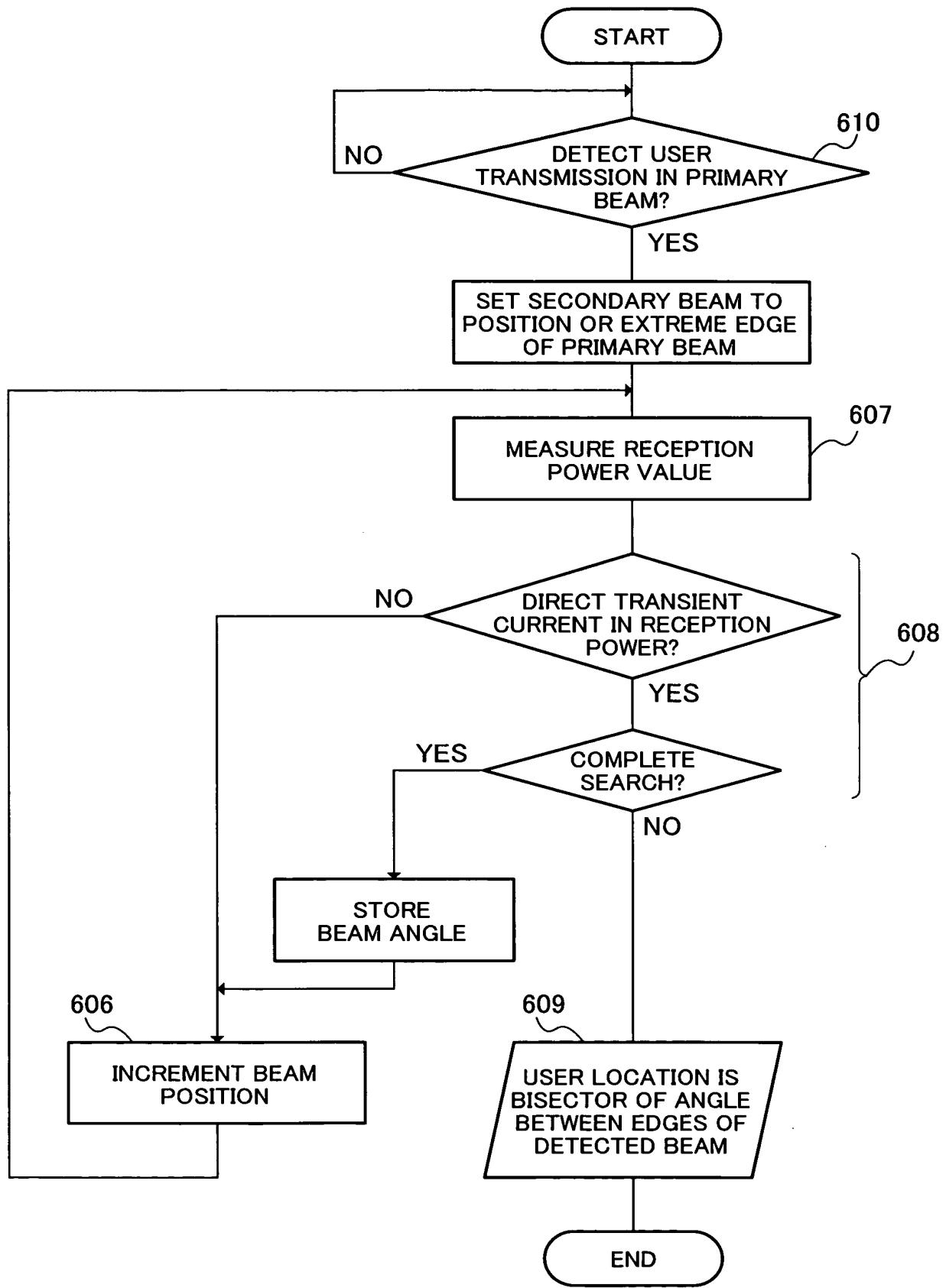


FIG.8

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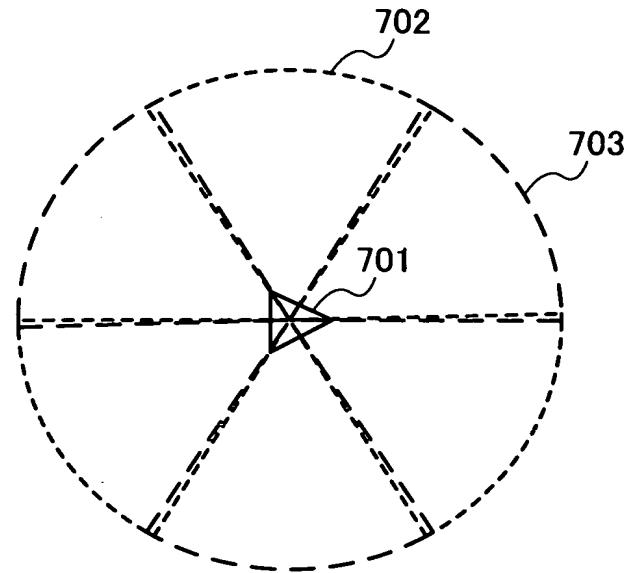


FIG.9

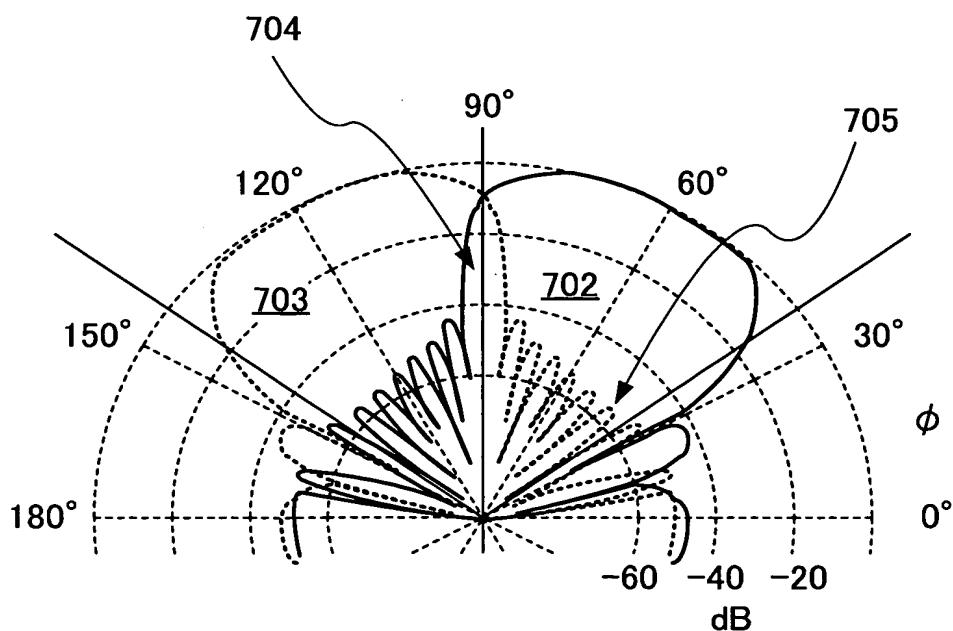


FIG.10

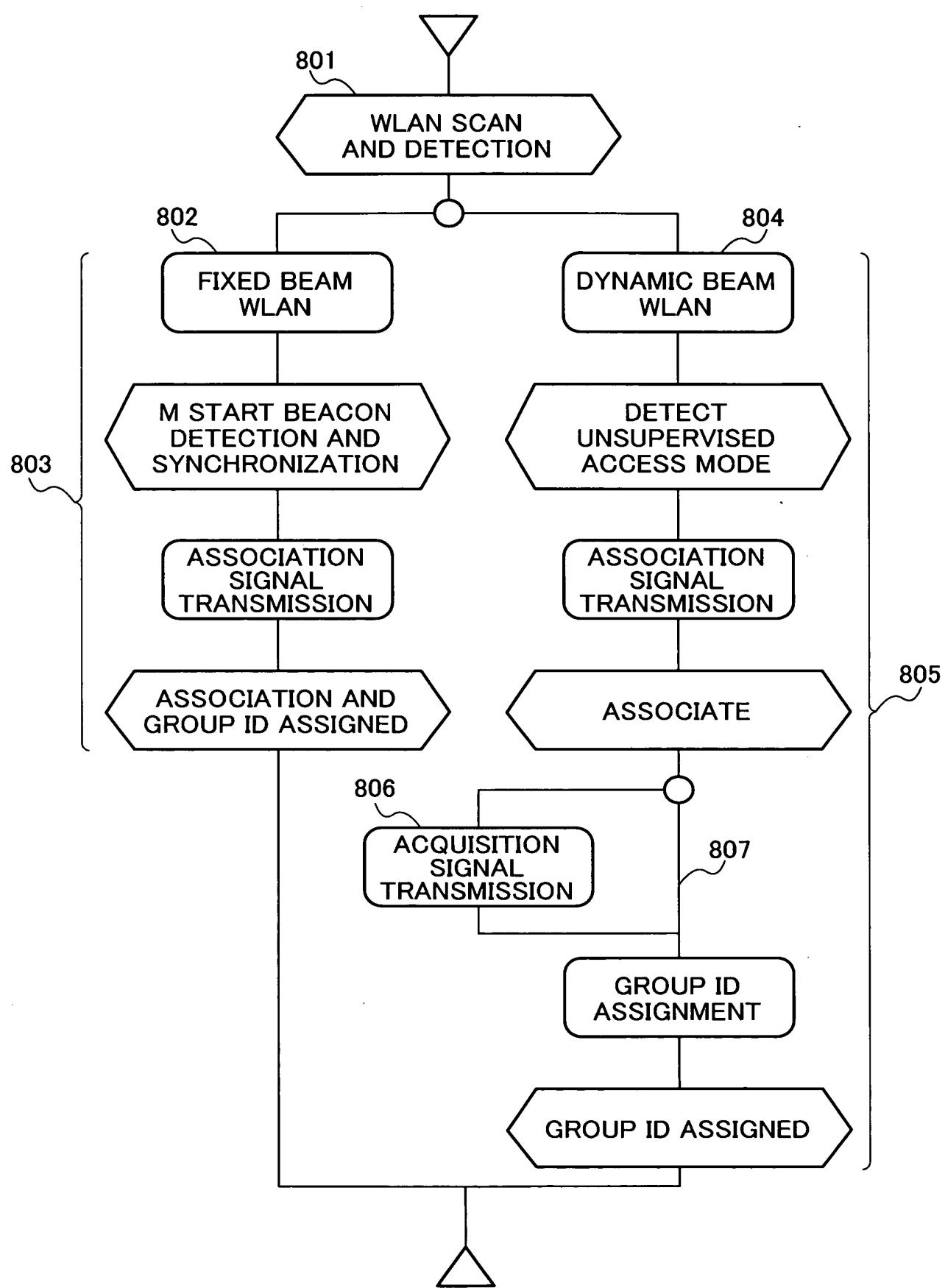


FIG.11

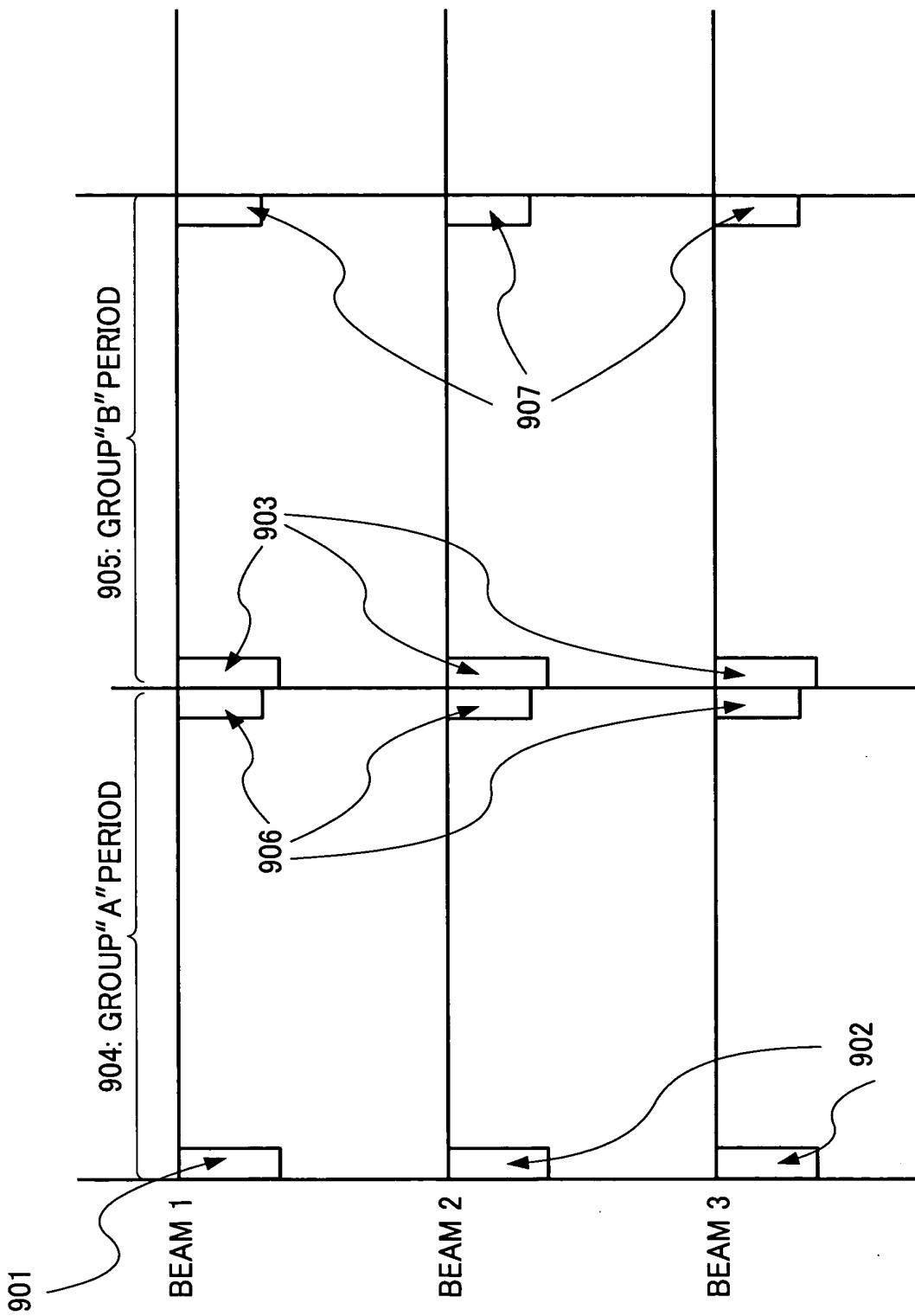


FIG.12

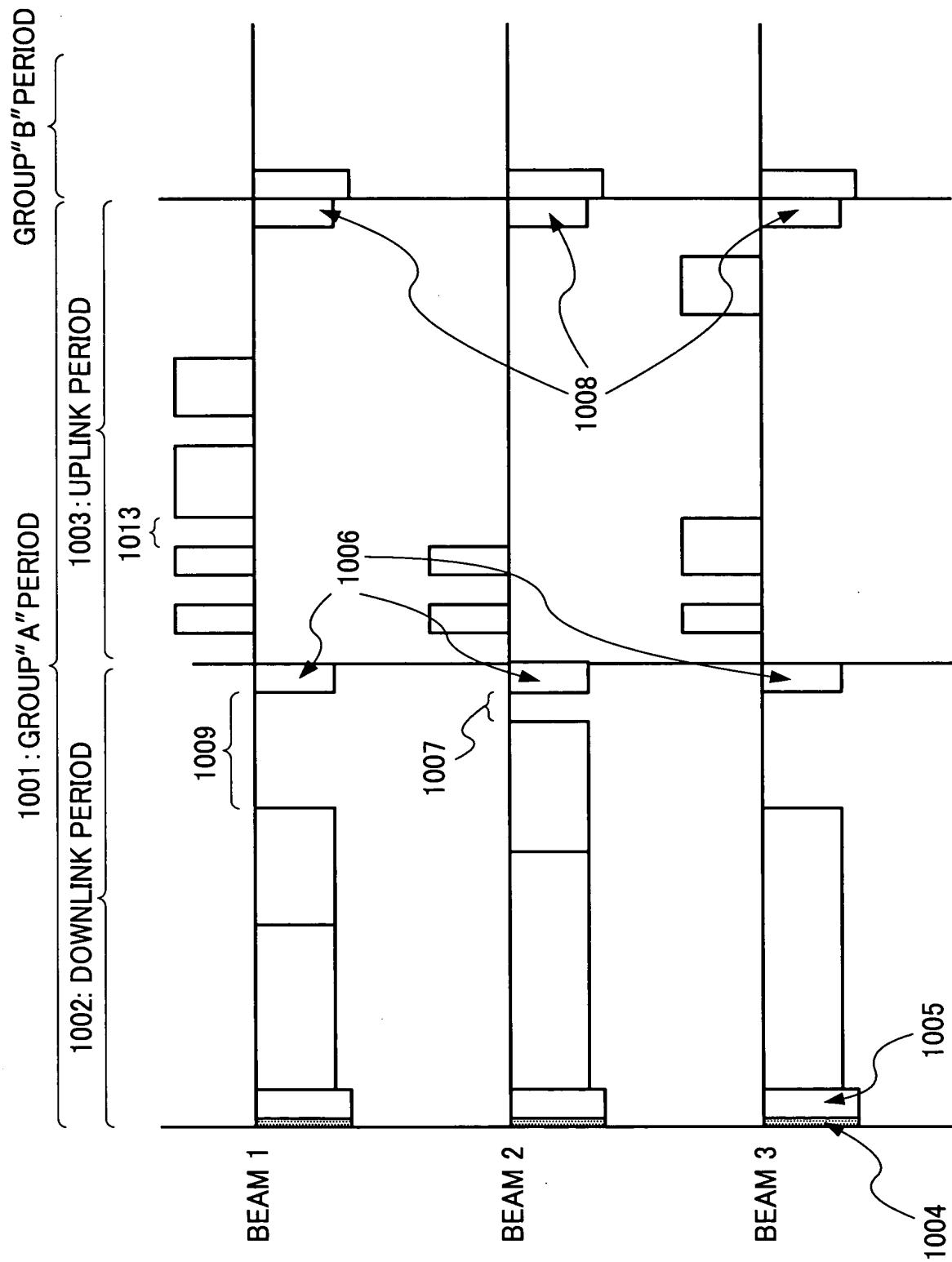


FIG.13

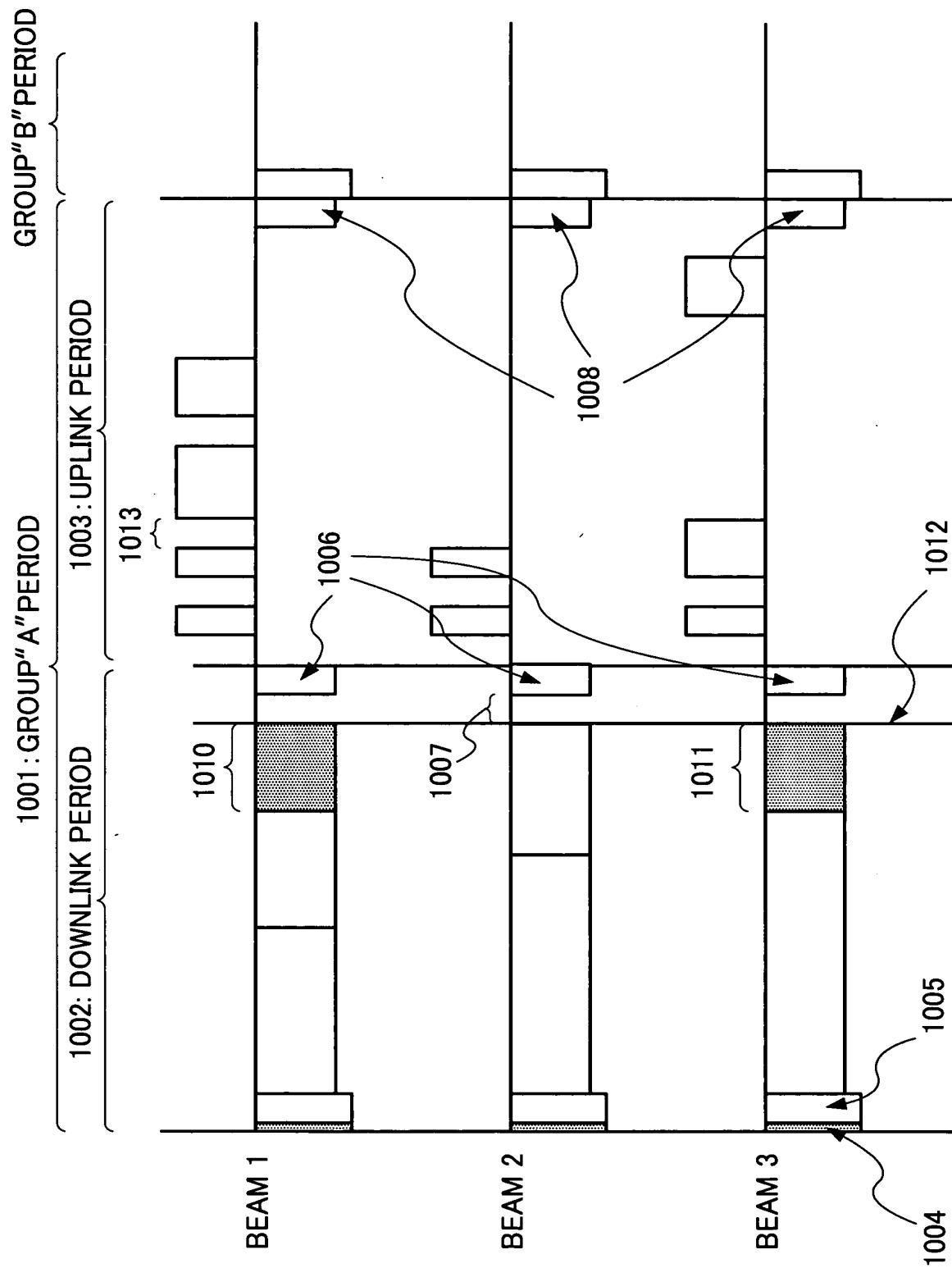


FIG.14